

ABSTRACT

The object of this invention is to provide a method for fabricating a semiconductor device in which the yield and productivity are improved. In the method for fabricating a semiconductor device according to the invention, a plasma etching system is prepared which includes a vacuum chamber 1, a susceptor 7 arranged in the vacuum chamber 1 to place a wafer 8, a gas introducing means 2 to introduce the material gas into the vacuum chamber and a high-frequency power introducing means 6. The gas introduced into the vacuum chamber by the gas introducing means 2 is converted into a plasma by the high-frequency power, and a plurality of holes are selectively formed in the oxide film 23 of a main wafer surface in a plasma atmosphere. In the hole forming step, light 15 having a continuous spectrum is irradiated on a flat portion and a hole portion of the main surface of the semiconductor wafer thereby to measure the reflectivity change in the flat portion and the hole portion.